

FLUID DELIVERY DEVICE, SYSTEM AND METHOD

Abstract

A system for the metering and delivery of small discrete volumes of liquid is comprised of a small or minimal number of inexpensive components. One such component is a movable member, such as a miniature precision reciprocating displacement pump head, which is driven by an actuator that comprises a shape memory alloy material. The operating mechanism of the system is of little or minimal complexity. The system facilitates the precise metering and delivery of the small discrete volumes of liquid. Potential applications for the system include subcutaneous, long-term, automated drug delivery, for example, the delivery of insulin to a person with diabetes. In such an application, the small, simple and inexpensive nature of the invention would allow for its use as both a portable and a disposable system.